

## 03040205-01

(*Scape Ore Swamp*)

### General Description

Watershed 03040205-01 (formerly 03040205-030, 03040205-040, 03040205-050, 03040205-060, and a portion of 03040205-070) is located in Lee, Kershaw, and Sumter Counties and consists primarily of *Scape Ore Swamp* and its tributaries. The watershed occupies 178,979 acres of the Sandhills and Upper Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 46.2% agricultural land, 24.8% forested land, 21.9% forested wetland, 5.2% urban land, 1.5% scrub/shrub land, 0.2% water, 0.1% nonforested wetland, and 0.1% barren land.

Timber Creek (Grassy Bottom Branch, Maple Branch, Long Branch, Nancy Branch, Pates Mill Branch, Fuzzy Branch) and Black Creek join to form Scape Ore Swamp. Downstream of the confluence, Scape Ore Swamp accepts drainage from Cedar Creek, Cedar Creek Pond, Gum Springs Branch and Beaverdam Creek. McGrits Creek flows through McGrits Millpond and Ashwood Lake before flowing into Mechanicsville Swamp, which drains into Scape Ore Swamp. Further downstream, Scape Ore Swamp accepts drainage from Long Branch (Little Long Branch) and Rocky Bluff Swamp.

Rocky Bluff Swamp accepts drainage from Lee Swamp (Ardis Pond), Whites Millpond, Brunson Branch (Mile Branch, Mulberry Branch), and Cowpen Swamp before draining into Scape Ore Swamp. Alligator Branch and Concord Branch enter the swamp at the base of the watershed. There are a total of 339.7 stream miles and 441.1 acres of lake waters in this watershed. Rocky Bluff Swamp and Lee Swamp are classified FW\* (Dissolved oxygen not less than 4.0 mg/l and pH between 5.0 and 8.0) and the remaining streams in the watershed are classified FW.

### Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
PD-355	W/INT	FW	SCAPE ORE SWAMP AT S-31-108
RS-01017	W-RS01	FW	MCGRITS CREEK AT CR 73, 7.5M SW OF BISHOPVILLE
CL-077	W/W	FW	LAKE ASHWOOD , FOREBAY EQUIDISTANT FROM DAM AND SHORE LINES
PD-356	W/INT	FW	MECHANICSVILLE SWAMP AT S-31-500
PD-357	W/INT	FW*	ROCKY BLUFF SWAMP AT US 76
PD-201	W/INT	FW	SCAPE ORE SWAMP AT S-43-41

*Scape Ore Swamp* - There are two SCDHEC monitoring stations along Scape Ore Swamp. This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. At the upstream site (**PD-355**), aquatic life uses are fully supported; however, there is a significant increasing trend in total nitrogen concentration. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Significant decreasing trends in five-day biochemical oxygen demand, turbidity, and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions. At the downstream site (**PD-201**), aquatic life and recreational uses are fully supported. Although

dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Significant increasing trends in dissolved oxygen concentration and decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters.

***McGrits Creek (RS-01017)*** – This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are not supported due to turbidity excursions and recreational uses are not supported due to fecal coliform bacteria excursions.

***Lake Ashwood (CL-077)*** – This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are not supported due to total nitrogen and chlorophyll-a excursions. Recreational uses are fully supported.

***Mechanicsville Swamp (PD-356)*** – This is a blackwater system, characterized by naturally low pH conditions. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are not supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. There is also a significant increasing trend in total nitrogen concentration. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. Recreational uses are fully supported.

***Rocky Bluff Swamp (PD-357)*** – This is a blackwater system, characterized by naturally low dissolved oxygen conditions. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life and recreational uses are fully supported, and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

## **NPDES Program**

### ***Active NPDES Facilities***

#### ***RECEIVING STREAM***

#### ***FACILITY NAME***

#### ***PERMITTED FLOW @ PIPE (MGD)***

#### ***NPDES#***

#### ***TYPE***

#### ***COMMENT***

BLACK CREEK  
CAROLINA GAS TRANSMISSION CORP.  
PIPE #: 001 FLOW: M/R  
SCAPE ORE SWAMP TRIBUTARY  
LEE COUNTY BORROW PIT  
PIPE #: 001 FLOW: M/R

SCG670001  
MINOR INDUSTRIAL

SCG730694  
MINOR INDUSTRIAL

BEAVERDAM CREEK  
JAMES L. CORBITT/CORBITT PIT  
PIPE #: 001 FLOW: M/R

SCG730461  
MINOR INDUSTRIAL

SCAPE ORE SWAMP  
JAY & J CONSTRUCTION/HOUSER MINE  
PIPE #: 001 FLOW: M/R

SCG730995  
MINOR INDUSTRIAL

ROCKY BLUFF SWAMP  
RE GOODSON/KIRVEN MINE  
PIPE #: 001 FLOW: M/R

SCG730996  
MINOR INDUSTRIAL

## **Nonpoint Source Management Program**

### ***Land Disposal Activities***

#### **Landfill Activities**

***SOLID WASTE LANDFILL NAME***  
***FACILITY TYPE***

***PERMIT #***  
***STATUS***

ASHWOOD DUMP  
MUNICIPAL

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CLOSED

SUMTER COUNTY LANDFILL  
MUNICIPAL

431001-1101  
CLOSED

SUMTER COUNTY TRANSFER STATION  
MUNICIPAL

431001-6001  
ACTIVE

SUMTER COUNTY LANDFILL  
MUNICIPAL

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CLOSED

SUMTER COUNTY C&D LANDFILL  
CONSTRUCTION

431001-1201, -1202, -1203  
ACTIVE

UNION CAMP  
LAND APPLICATION

433313-8001  
INACTIVE

### ***Mining Activities***

***MINING COMPANY***  
***MINE NAME***

***PERMIT #***  
***MINERAL***

LEE COUNTY  
LEE COUNTY BORROW PIT

1042-61  
SAND/CLAY

JAMES L. CORBITT  
CORBITTS PIT

1301-61  
SAND; SAND/CLAY

RICHARDSON CONSTRUCTION CO.  
LOWRY BORROW PIT

1612-85  
SAND

WR MCLEOD  
MCCLEOD MINE

1304-85  
SAND; SAND/CLAY

## **Growth Potential**

There is a moderate to high potential for growth in this watershed around the City of Sumter. Residential, commercial, and industrial growth is expected in the area fringing the City of Sumter. Growth is also expected along the corridor of U.S. Hwy. 76 en route from Sumter to the City of Florence, and I-20 which crosses the watershed south of the City of Bishopville. U.S. Hwys. 15, 521, and 378 also bisect the watershed, along with two rail lines. There is a low potential for growth in the remainder of the watershed. Some growth may occur surrounding the

interchanges of I-95 and the U.S. Hwy. 378 corridor. The remainder of the watershed is rural with agricultural and timberland uses.

## **Watershed Restoration and Protection**

### ***Total Maximum Daily Loads (TMDLs)***

A TMDL was developed by SCDHEC and approved by the EPA for *Scape Ore Swamp* (monitoring site **PD-355**) to determine the maximum amount of fecal coliform bacteria it can receive from nonpoint sources and still meet water quality standards. The nonpoint sources that have been determined to be contributors to the Scape Ore Swamp impairment include wildlife, grazing livestock and livestock defecating directly into streams, land application of poultry litter, and failed or malfunctioning septic systems. To achieve compliance with water quality standards, the TMDL recommends fecal coliform bacteria loads contributed by livestock sources and runoff from poultry litter application be reduced by approximately 58%, and existing fecal coliform bacteria loads contributed by failing septic systems be reduced by 100%.

### ***Special Projects***

#### **Fecal Coliform Bacteria TMDL Development and Implementation for the Scape Ore Swamp Watershed**

The Santee-Wateree Resource Conservation and Development Council (RC&D), along with the Lee and Kershaw Soil and Water Conservation Districts, Lee and Kershaw Natural Resource Conservation Services, and the Department of Natural Resources have developed and implemented a fecal coliform bacteria TMDL for the Scape Ore Swamp watershed. The TMDL addresses the impairment at SCDHEC station PD-355, potential sources of pollution, and the amount of reduction needed to meet water quality standards. During the implementation phase of this project, RC&D staff identified homeowners and agriculture operations that could potentially contribute to the impairment. Through voluntary agreements and cost share assistance, a series of best management practices (BMPs) were installed to address fecal coliform loading in the watershed. These BMPs were designed to reduce the loading of fecal coliform into the respective watersheds. These BMPs included replacing or repairing failing septic tanks, fencing out livestock from streams, and providing alternative water sources for livestock. Additionally, RC&D identifies several local farmers who applied poultry litter as fertilizer for their crops. By establishing nutrient management plans and installing waste storage facilities, the project managers were able to significantly reduce the runoff of bacteria getting into local streams. Because of these BMPs, SCDHEC has begun to see fecal coliform reductions at PD-355 that, if continued, will ultimately result in the attainment of water quality standards in Scape Ore Swamp.